Claims

1. A method for over-molding an electronic assembly, comprising the steps of:

providing a mold;

providing an electronic assembly, the electronic assembly comprising:

a printed circuit board (PCB) including at least one associated electronic component electrically coupled to the PCB and at least one associated electrical connector electrically coupled to the PCB, the connector including a connector shroud; and

a backplate, wherein at least a portion of the PCB engages the backplate and the at least one associated electronic component is in thermal contact with the backplate; and

placing the electronic assembly within the mold;

closing the mold on the electronic assembly, wherein a first portion of the mold engages the backplate of the electronic assembly and a second portion of the mold sealingly engages the connector shroud of the at least one associated connector which is designed to deflect such that the PCB is not deflected; and

inserting a mold material into the mold, whereby the electronic assembly is over-molded.

2. The method of claim 1, wherein the mold is a two-piece mold.

3. The method of claim 1, wherein the connector shroud includes a lip that sealingly engages the second portion of the mold, and wherein the lip is configured to deform to prevent a force imparted from the second portion of the mold to the connector from deflecting the PCB.

4. The method of claim 1, wherein the connector includes a slip ring that is interference fit to the connector shroud and sealingly engages the second portion of the mold and slides along a body of the connector to prevent a force imparted from the second portion of the mold to the connector from deflecting the PCB.

5. The method of claim 1, wherein the second portion of the mold includes a seal that sealingly engages the connector, and wherein the seal is configured to deform to prevent a force imparted from the second portion of the mold to the connector from deflecting the PCB.

6. The method of claim 1, wherein the connector is electrically coupled to the PCB by a flexible circuit that prevents a force imparted from the second portion of the mold to the connector from deflecting the PCB.

7. An over-molded electronic assembly, comprising:

a printed circuit board (PCB) including at least one associated electronic component electrically coupled to the PCB and at least one associated connector electrically coupled to the PCB, the connector including a connector shroud;

a backplate, wherein at least a portion of the PCB engages the backplate and the at least one associated electronic component is in thermal contact with the backplate, wherein a portion of the connector shroud includes a lip that sealingly engages a portion of a mold during over-molding, and wherein the lip is configured to prevent a force imparted from the mold to the connector from deflecting the PCB during over-molding; and

a mold material environmentally sealing the PCB and the at least one associated electronic component.

8. The assembly of claim 7, wherein the lip is a slip ring that is interference fit to the connector shroud and sealingly engages the mold during over-molding, and wherein the slip ring slides along a body of the connector to prevent a force imparted from the mold from deflecting the PCB.

9. An over-molded electronic assembly, comprising:

a printed circuit board (PCB) including at least one associated electronic component electrically coupled to the PCB and at least one associated connector electrically coupled to the PCB, the connector including a connector shroud;

a backplate, wherein at least a portion of the PCB engages the backplate and the at least one associated electronic component is in thermal contact with the backplate, wherein a portion of the connector shroud includes a lip that sealingly engages a portion of a mold during over-molding;

a flexible circuit electrically coupling the connector to the PCB, wherein the flexible circuit prevents a force imparted from the mold to the connector during over-molding from deflecting the PCB; and

a mold material environmentally sealing the PCB, the flexible circuit and the at least one associated electronic component.

10. A method for over-molding an electronic assembly, comprising the steps of:

providing a two-piece mold;

providing an electronic assembly, the electronic assembly comprising:

a printed circuit board (PCB) including at least one associated electronic component electrically coupled to the PCB and at least one associated electrical connector electrically coupled to the PCB, the connector including a connector shroud; and

a backplate, wherein at least a portion of the PCB engages the backplate and the at least one associated electronic component is in thermal contact with the backplate; and

placing the electronic assembly within the mold;

closing the mold on the electronic assembly, wherein a first portion of the mold engages the backplate of the electronic assembly and a second portion of the mold sealingly engages the at least one associated connector such that the PCB is not deflected; and

inserting a mold material into the mold, whereby the electronic assembly is over-molded.

11. The method of claim 10, wherein the connector shroud includes a lip that sealingly engages the second portion of the mold, and wherein the lip is configured to deform to prevent a force imparted from the second portion of the mold to the connector from deflecting the PCB.

12. The method of claim 10, wherein the connector includes a slip ring that is interference fit to the connector shroud and sealingly engages the second portion of the mold, and wherein the slip ring slides along a body of the connector to prevent a force imparted from the second portion of the mold to the connector from deflecting the PCB.

13. The method of claim 10, wherein the second portion of the mold includes a seal that sealingly engages the connector, and wherein the seal is configured to deform to prevent a force imparted from the second portion of the mold to the connector from deflecting the PCB.

14. The method of claim 10, wherein the connector is electrically coupled to the PCB by a flexible circuit that prevents a force imparted from the second portion of the mold to the connector from deflecting the PCB.